

U.S. Consumer Product Safety Commission
LOG OF MEETING

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EXEMPT FROM AUTOMATIC
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SUBJECT: Wire system safety

DATE OF MEETING: June 28, 2001

LOG ENTRY SOURCE: William H. King, Jr., ES *W.H.K.*

DATE OF LOG ENTRY: July 2, 2001

LOCATION: 1300 N. 17th., Rosslyn, VA

CPSC ATTENDEE(S): William H. King, Jr., ES

NON-CPSC ATTENDEE(S):
Frank Kitzantides, National Electrical Mfrs. Assoc. (NEMA)
and other NEMA staff.

SUMMARY OF MEETING: Mr. King provided an overview of the activities of the inter-agency working group on wire system safety. He provided copies of the attached press release issued by the Executive Branch, Office of Science and Technology Policy, and the attached outline presentation on the review of Federal programs for wire system safety.

CPSA 6 (b)(1) Cleared

7-5-01
No Mfrs/Private Labels

Products Identified

THE WHITE HOUSE

Office of Science and Technology Policy

**For Immediate Release
November 15, 2000**

Contact 202/456-6108

New Report Details Actions to Improve Safety of Nation's Wiring Systems

Dr. Neal Lane, Assistant to the President for Science and Technology, today released a report entitled *Review of Federal Programs for Wire System Safety*. This follow-on report, in response to an earlier recommendation by the White House Commission on Aviation Safety and Security, goes beyond aviation to analyze all Federal science and technology initiatives dealing with the aging and the deterioration of wiring systems in electrical or information systems that could result in health or safety problems. Experts from 17 Federal agencies made recommendations to improve wire system safety in the areas of transportation, national security, health, energy, and consumer affairs.

The President's science advisor said, "A coordinated government-industry partnership is required to resolve this national concern. We need further research on what happens to wiring throughout its lifetime -- from its initial design to its maintenance to its old age. This is the first comprehensive look at what the common issues are and what steps must be taken to assure today's high level of safety in the future."

The report highlights specific areas that require additional attention to predict or detect problems in wiring systems so that they can be fixed before they cause an incident or accident. The report recommends development of new tools to collect reliable data and detect wiring problems in the field, improved processes and technology for repair and replacement, and innovative design approaches and materials to meet the ever-increasing demand for all types of electrical and information systems. New computer models are also needed to predict when wiring should be replaced under different environmental conditions.

The report is available at: http://ostp.gov/NSTC/html/nstc_pubs.html

30-30-30

Review of Federal Programs for Wire System Safety

National Science & Technology Council
Committee on Technology

Wire System Safety Interagency Working Group

Background

- Gore Commission Feb 1997 - Aging Wiring in Aircraft
- FAA/NASA/DOD initiate Aging Wire Programs
- NASA Shuttle Safety Report May 2000 - Aging Wiring and Issue Beyond Aviation
- OSTP Initiates NSTC IWG May 10 - Calls for the formation of Wire System Safety Interagency Working Group Under Technology Committee
- First WSSIWG Meeting June 2- 14 Agencies
- Terms of Reference Complete
- Report to the President November 2000
- National Wire System Safety Strategy March 2001

Wire System Safety Interagency Working Group

Consumer Product Safety Commission	National Aeronautics and Space Administration
Department of Commerce	National Science Foundation
Department of Defense	Nuclear Regulatory Commission
Office of the Secretary of Defense	In addition, the following organizations are represented on the WSSIWC:
United States Air Force	Defense Nuclear Facilities Safety Board
United States Navy	Office of Management and Budget
United States Army	Office of Science and Technology Policy
Department of Energy	National Partnership for Reinventing Government
Department of Transportation	National Transportation Safety Board (observer)
Federal Aviation Administration	
Federal Railroad Administration	
Federal Transit Administration	
US Coast Guard	
Food and Drug Administration	

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Organization of Report

- Introduction
- Potential Wiring Safety Issues
- Current Practices
- Current Science & Technology (S&T) Initiatives
- Analysis of Current Practices and S&T Initiatives
- Conclusions & Recommendations

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Mission of WSSIWG

1. Define processes for federal agencies to collaborate on S&T initiatives in wire system safety.
2. Provide mechanisms for federal agencies to collaborate with industry, national laboratories, and academia.
3. Provide strategic direction for federal investment in wire system safety.
4. Accelerate development of advanced technology in wire system safety.
5. Ensure that the results of federal S&T initiatives are communicated in a timely way to facilitate their rapid implementation with the goal of improving public health and safety.

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Potential Wire Safety Issues

- Environmental Stress - Chafing, embrittlement, and corrosion
- Improper installation
- Mishandling of wiring during maintenance
- Accumulated damage as wire ages

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Common Findings

- Faulty wiring poses a risk to public health and safety; it may lead to failure of essential functions and even to smoke and fire.
- Managing aging wire systems is expensive and time-consuming.
- Inspection, testing, and maintenance of wire systems is a technical challenge.
- Most diagnostic procedures can detect only “hard failures” that result in serious deterioration of electrical integrity.
- Our knowledge about how wire systems age and how they fail is limited.

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Common Findings

- There are limitations to our electrical codes and standards.
- Wire systems are becoming more complex with increasing computerization of operations and of information about those operations.
- Wire system maintenance is very expensive and it is difficult to get funding to address wiring issues before a system break down.
- Current practices flow from – and are limited by – the current state-of-the-art of wire systems technology in terms of design, installation, diagnosis and maintenance.

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Conclusion

Wire system safety is a national public health and safety issue that transcends government agencies.

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Recommendations

- Four basic strategies are necessary to improve wire system safety:
 - Altering the perception of wire systems.
 - Increasing collaboration between industry, academia, and the government.
 - Improving the management and functionality of wire systems.
 - Improving wire system technology.

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Next Steps

- Educate People of the Problem
- Future WSSIWG Meetings
 - National Wire System Safety Strategy
 - How we will implement the report
 - Communications and Coordination Plan
 - Between Federal Agencies
 - Government - Industry